STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/562,081
Source: IFW2P
Date Processed by STIC: 01/09/2006

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO **REDUCE** ERRORED SEQUENCE LISTINGS, **PLEASE** USE THE **CHECKER VERSION 4.4.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**http://www.uspto.gov/ebc/efs/downloads/documents.htm**> , **EFS Submission User Manual** - ePAVE)
2. **U.S. Postal Service:** Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. **Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):** U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06

Raw Sequence Listing Error Summary

ERROR DETECTED | **SUGGESTED CORRECTION** | **SERIAL NUMBER:** 10/562,081

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1____ Wrapped Nucleics / Wrapped Aminos — The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor **after** creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2____ Invalid Line Length — The rules require that a line **not exceed** 72 characters in length. This includes white spaces.

3____ Misaligned Amino Numbering — The numbering under each 5th amino acid is misaligned. Do **not** use tab codes between numbers; use **space characters**, instead.

4____ Non-ASCII — The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please ensure your subsequent submission is saved in ASCII text.**

5____ Variable Length — Sequence(s)____contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the **maximum** number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6____ PatentIn 2.0 "bug" — A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**

7____ Skipped Sequences (OLD RULES) — Sequence(s) ____ missing. If intentional, please insert the following lines for **each** skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to **include** the skipped sequences.

8____ Skipped Sequences (NEW RULES) — Sequence(s) ____ missing. If **intentional**, please insert the following lines for **each** skipped sequence.
<210> sequence id number
<400> sequence id number
000

9____ Use of n's or Xaa's (NEW RULES) — Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of **n** or **Xaa**, and which residue **n** or **Xaa** represents.

10____ Invalid <213> Response — Per 1.823 of Sequence Rules, the only **valid** <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or is Artificial Sequence

11____ Use of <220> — ~~Sequence(s) ____ missing the <220> "Feature" and associated numeric identifiers and responses.~~
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

12____ PatentIn 2.0 "bug" — Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13____ Misuse of n/Xaa — "n" can **only** represent a single nucleotide; "Xaa" can **only** represent a single amino acid

IFWP

RAW SEQUENCE LISTING DATE: 01/09/2006
PATENT APPLICATION: **US/10/562,081** TIME: 11:14:15

Input Set : **A:\50318.011001.ST25.txt**
Output Set: **N:\CRF4\01092006\J562081.raw**

```
      3 <110> APPLICANT: Vuolteenaho, Olli
      4       Ala-Kopsala, Minna
      5       Ruskoaho, Heikki
      6       Leppaluoto, Juhani
      7       Haapalahti, Jouko
      9 <120> TITLE OF INVENTION: Assay
     11 <130> FILE REFERENCE: 50318/011001
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/562,081
C--> 13 <141> CURRENT FILING DATE: 2005-12-23
     13 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/006971
     14 <151> PRIOR FILING DATE: 2004-06-28
     16 <150> PRIOR APPLICATION NUMBER: GB 031 5291.5
     17 <151> PRIOR FILING DATE: 2003-06-30
     19 <160> NUMBER OF SEQ ID NOS: 36
     21 <170> SOFTWARE: PatentIn version 3.3
     23 <210> SEQ ID NO: 1
     24 <211> LENGTH: 126
     25 <212> TYPE: PRT
     26 <213> ORGANISM: Homo sapiens
     28 <400> SEQUENCE: 1
     30 Asn Pro Met Tyr Asn Ala Val Ser Asn Ala Asp Leu Met Asp Phe Lys
     31 1               5                   10                  15
     34 Asn Leu Leu Asp His Leu Glu Glu Lys Met Pro Leu Glu Asp Glu Val
     35             20                  25                  30
     38 Val Pro Pro Gln Val Leu Ser Glu Pro Asn Glu Glu Ala Gly Ala Ala
     39         35                  40                  45
     42 Leu Ser Pro Leu Pro Glu Val Pro Pro Trp Thr Gly Glu Val Ser Pro
     43     50                  55                  60
     46 Ala Gln Arg Asp Gly Gly Ala Leu Gly Arg Gly Pro Trp Asp Ser Ser
     47 65                  70                  75                  80
     50 Asp Arg Ser Ala Leu Leu Lys Ser Lys Leu Arg Ala Leu Leu Thr Ala
     51                 85                  90                  95
     54 Pro Arg Ser Leu Arg Arg Ser Ser Cys Phe Gly Gly Arg Met Asp Arg
     55             100                 105                 110
     58 Ile Gly Ala Gln Ser Gly Leu Gly Cys Asn Ser Phe Arg Tyr
     59         115                 120                 125
     62 <210> SEQ ID NO: 2
     63 <211> LENGTH: 28
     64 <212> TYPE: PRT
     65 <213> ORGANISM: Homo sapiens
     67 <400> SEQUENCE: 2
     69 Ser Leu Arg Arg Ser Ser Cys Phe Gly Gly Arg Met Asp Arg Ile Gly
     70 1               5                   10                  15
```

Does Not Comply
Corrected Diskette Needed
(pg-415)

RAW SEQUENCE LISTING DATE: 01/09/2006
PATENT APPLICATION: **US/10/562,081** TIME: 11:14:15

Input Set : **A:\50318.011001.ST25.txt**
Output Set: **N:\CRF4\01092006\J562081.raw**

```
73 Ala Gln Ser Gly Leu Gly Cys Asn Ser Phe Arg Tyr
74             20                  25
77 <210> SEQ ID NO: 3
78 <211> LENGTH: 98
79 <212> TYPE: PRT
80 <213> ORGANISM: Homo sapiens
82 <400> SEQUENCE: 3
84 Asn Pro Met Tyr Asn Ala Val Ser Asn Ala Asp Leu Met Asp Phe Lys
85 1               5                   10                  15
88 Asn Leu Leu Asp His Leu Glu Glu Lys Met Pro Leu Glu Asp Glu Val
89             20                  25                  30
92 Val Pro Pro Gln Val Leu Ser Glu Pro Asn Glu Glu Ala Gly Ala Ala
93         35                  40                  45
96 Leu Ser Pro Leu Pro Glu Val Pro Pro Trp Thr Gly Glu Val Ser Pro
97     50                  55                  60
100 Ala Gln Arg Asp Gly Gly Ala Leu Gly Arg Gly Pro Trp Asp Ser Ser
101 65                  70                  75                  80
104 Asp Arg Ser Ala Leu Leu Lys Ser Lys Leu Arg Ala Leu Leu Thr Ala
105                 85                  90                  95
108 Pro Arg
112 <210> SEQ ID NO: 4
113 <211> LENGTH: 108
114 <212> TYPE: PRT
115 <213> ORGANISM: Homo sapiens
117 <400> SEQUENCE: 4
119 His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly
120 1               5                   10                  15
123 Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu Gln
124             20                  25                  30
127 Val Glu Gln Thr Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr
128         35                  40                  45
131 Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly His
132     50                  55                  60
135 Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys Met
136 65                  70                  75                  80
139 Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser
140                 85                  90                  95
143 Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
144             100                 105
147 <210> SEQ ID NO: 5
148 <211> LENGTH: 32
149 <212> TYPE: PRT
150 <213> ORGANISM: Homo sapiens
152 <400> SEQUENCE: 5
154 Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
155 1               5                   10                  15
158 Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
159             20                  25                  30
162 <210> SEQ ID NO: 6
```

RAW SEQUENCE LISTING DATE: 01/09/2006
PATENT APPLICATION: **US/10/562,081** TIME: 11:14:15

Input Set : **A:\50318.011001.ST25.txt**
Output Set: **N:\CRF4\01092006\J562081.raw**

<211> LENGTH: 76
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 6

```
His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly
1               5                  10                  15
Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu Gln
            20                  25                  30
Val Glu Gln Thr Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr
        35                  40                  45
Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly His
    50                  55                  60
Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg
65                  70                  75
```

<210> SEQ ID NO: 7
<211> LENGTH: 378
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 7

```
aatcccatgt acaatgccgt gtccaacgca gacctgatgg atttcaagaa tttgctggac     60
catttggaag aaaagatgcc tttagaagat gaggtcgtgc ccccacaagt gctcagtgag    120
ccgaatgaag aagcgggggc tgctctcagc cccctccctg aggtgcctcc ctggaccggg    180
gaagtcagcc cagcccagag agatggaggt gccctcgggc ggggcccctg ggactcctct    240
gatcgatctg ccctcctaaa aagcaagctg agggcgctgc tcactgcccc tcggagcctg    300
cggagatcca gctgcttcgg gggcaggatg gacaggattg gagcccagag cggactgggc    360
tgtaacagct tccggtac                                                  378
```

<210> SEQ ID NO: 8
<211> LENGTH: 84
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 8

```
agcctgcgga gatccagctg cttcgggggc aggatggaca ggattggagc ccagagcgga     60
ctgggctgta acagcttccg gtac                                            84
```

<210> SEQ ID NO: 9
<211> LENGTH: 294
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 9

```
aatcccatgt acaatgccgt gtccaacgca gacctgatgg atttcaagaa tttgctggac     60
catttggaag aaaagatgcc tttagaagat gaggtcgtgc ccccacaagt gctcagtgag    120
ccgaatgaag aagcgggggc tgctctcagc cccctccctg aggtgcctcc ctggaccggg    180
gaagtcagcc cagcccagag agatggaggt gccctcgggc ggggcccctg ggactcctct    240
gatcgatctg ccctcctaaa aagcaagctg agggcgctgc tcactgcccc tcgg           294
```

<210> SEQ ID NO: 10
<211> LENGTH: 324
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 10

```
cacccgctgg gcagccccgg ttcagcctcg gacttggaaa cgtccgggtt acaggagcag     60
```

RAW SEQUENCE LISTING DATE: 01/09/2006
PATENT APPLICATION: **US/10/562,081** TIME: 11:14:15

Input Set : **A:\50318.011001.ST25.txt**
Output Set: **N:\CRF4\01092006\J562081.raw**

```
    246 cgcaaccatt tgcagggcaa actgtcggag ctgcaggtgg agcagacatc cctggagccc    120
    248 ctccaggaga gcccccgtcc cacaggtgtc tggaagtccc gggaggtagc caccgagggc    180
    250 atccgtgggc accgcaaaat ggtcctctac accctgcggg caccacgaag ccccaagatg    240
    252 gtgcaagggt ctggctgctt tgggaggaag atggaccgga tcagctcctc cagtggcctg    300
    254 ggctgcaaag tgctgaggcg gcat                                          324
    257 <210> SEQ ID NO: 11
    258 <211> LENGTH: 96
    259 <212> TYPE: DNA
    260 <213> ORGANISM: Homo sapiens
    262 <400> SEQUENCE: 11
    263 agccccaaga tggtgcaagg gtctggctgc tttgggagga agatggaccg gatcagctcc     60
    265 tccagtggcc tgggctgcaa agtgctgagg cggcat                              96
    268 <210> SEQ ID NO: 12
    269 <211> LENGTH: 228
    270 <212> TYPE: DNA
    271 <213> ORGANISM: Homo sapiens
    273 <400> SEQUENCE: 12
    274 cacccgctgg gcagccccgg ttcagcctcg gacttggaaa cgtccgggtt acaggagcag     60
    276 cgcaaccatt tgcagggcaa actgtcggag ctgcaggtgg agcagacatc cctggagccc    120
    278 ctccaggaga gcccccgtcc cacaggtgtc tggaagtccc gggaggtagc caccgagggc    180
    280 atccgtgggc accgcaaaat ggtcctctac accctgcggg caccacga                 228
    283 <210> SEQ ID NO: 13
    284 <211> LENGTH: 25
    285 <212> TYPE: PRT
    286 <213> ORGANISM: Artificial sequence
    288 <220> FEATURE:
    289 <223> OTHER INFORMATION:
W--> 291 <400> 13
    293 Ser Gly Leu Gln Glu Gln Arg Asn His Leu Arg Ser Ala Leu Leu Lys
    294 1               5                  10                  15
    297 Ser Lys Leu Arg Ala Leu Leu Thr Ala
    298             20                  25
    301 <210> SEQ ID NO: 14
    302 <211> LENGTH: 107
    303 <212> TYPE: PRT
    304 <213> ORGANISM: Artificial sequence
    306 <220> FEATURE:
    307 <223> OTHER INFORMATION:
W--> 309 <400> 14
    311 His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly
    312 1               5                  10                  15
    315 Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu Gln
    316             20                  25                  30
    319 Val Glu Gln Thr Ser Glu Asp Glu Val Val Pro Pro Gln Val Leu Ser
    320         35                  40                  45
    323 Glu Pro Asn Glu Glu Ala Gly Ala Ala Leu Ser Pro Leu Pro Glu Val
    324     50                  55                  60
    327 Pro Pro Trp Thr Gly Glu Val Ser Pro Ala Gln Arg Asp Gly Gly Ala
    328 65                  70                  75                  80
```

9 of 2137 is Artificial. Explanation should be an explanation to what is the source? P/s See Item # 11 on Error Summary Sheet.

Same Error

RAW SEQUENCE LISTING DATE: 01/09/2006
PATENT APPLICATION: **US/10/562,081** TIME: 11:14:15

Input Set : **A:\50318.011001.ST25.txt**
Output Set: **N:\CRF4\01092006\J562081.raw**

331 Leu Gly Arg Gly Pro Trp Asp Ser Ser Asp Arg Ser Ala Leu Leu Lys
332 85 90 95
335 Ser Lys Leu Arg Ala Leu Leu Thr Ala Pro Arg
336 100 105
339 <210> SEQ ID NO: 15
340 <211> LENGTH: 81
341 <212> TYPE: PRT
342 <213> ORGANISM: Artificial sequence
344 <220> FEATURE:
345 <223> OTHER INFORMATION:
W--> 347 <400> 15
349 Ser Asp Leu Glu Thr Ser Gly Leu Gln Glu Gln Arg Asn His Leu Gln
350 1 5 10 15
353 Gly Lys Leu Ser Asp His Leu Glu Glu Lys Met Pro Leu Glu Asp Glu
354 20 25 30
357 Val Val Pro Pro Gln Val Leu Ser Glu Pro Asn Glu Glu Ala Gly Ala
358 35 40 45
361 Ala Leu Ser Pro Leu Pro Glu Val Pro Pro Trp Thr Gly Glu Val Ser
362 50 55 60
365 Pro Ala Gln Arg Asp Gly Gly Ala Leu Gly Arg Gly Pro Trp Asp Ser
366 65 70 75 80
369 Ser
373 <210> SEQ ID NO: 16
374 <211> LENGTH: 4
375 <212> TYPE: PRT
376 <213> ORGANISM: Artificial sequence
378 <220> FEATURE:
379 <223> OTHER INFORMATION:
W--> 381 <400> 16
383 Gly Lys Tyr Gly
384 1
387 <210> SEQ ID NO: 17
388 <211> LENGTH: 174
389 <212> TYPE: PRT
390 <213> ORGANISM: Artificial sequence
392 <220> FEATURE:
393 <223> OTHER INFORMATION:
W--> 395 <400> 17
397 His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly
398 1 5 10 15
401 Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu Gln
402 20 25 30
405 Val Glu Gln Thr Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr
406 35 40 45
409 Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly His
410 50 55 60
413 Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg Asn Pro Met Tyr
414 65 70 75 80
417 Asn Ala Val Ser Asn Ala Asp Leu Met Asp Phe Lys Asn Leu Leu Asp

Same Error. P/s Explain The Source Of Genetic Material.

Same

VERIFICATION SUMMARY DATE: 01/09/2006
PATENT APPLICATION: **US/10/562,081** TIME: 11:14:16

Input Set : **A:\50318.011001.ST25.txt**
Output Set: **N:\CRF4\01092006\J562081.raw**

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:291 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:13,Line#:289
L:309 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:14,Line#:307
L:347 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:15,Line#:345
L:381 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:16,Line#:379
L:395 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:17,Line#:393
L:449 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:18,Line#:447
L:471 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:19,Line#:469
L:541 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:20,Line#:539
L:559 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:21,Line#:557
L:573 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:22,Line#:571
L:595 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:23,Line#:593
L:615 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:24,Line#:613
L:643 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:25,Line#:641
L:659 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:26,Line#:657
L:693 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:27,Line#:691
L:707 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:28,Line#:705
L:719 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:29,Line#:717
L:731 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:30,Line#:729
L:743 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:31,Line#:741
L:755 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:32,Line#:753